IQE wins major outsourcing contract

IQE's North American subsidiary, IQE Inc, secured a major outsourcing contract to supply an undisclosed North American RF component manufacturer with epitaxial materials for its RF based components used in mobile handsets.

Running from 1 November 2004, the contract is for a minimum term of two years, renewable annually thereafter, and is estimated to be worth $25m to IQE over the initial period. IQE's Bethlehem site will supply more than 90% of the customer's anticipated demand for their advanced RF wafer products.

As a result, internal wafer manufacture at the customer's site will cease. Both parties have been working closely together for several years; a relationship through which IQE has gained a high degree of confidence in its own ability to service the outsourced epiwafer needs of major manufacturers.

IQE's president and CEO, Drew Nelson, said: "This agreement with such a prominent global supplier of RF components for the cellular phone market demonstrates a clear movement towards the outsourcing model within the compound semiconductor industry. Their selection of IQE as the primary partner, as a result of our large and comprehensive production capacity, and low cost structure, endorses the company's commitment to the outsource model."

A spokesman for the customer said: "Outsourcing certain products and services such as the manufacture of our RF epitaxial wafers allow us to concentrate our efforts on the processes that add significant value to our product offering within the global, highly competitive RF market place and we are pleased to build on previous work we have undertaken with IQE. This agreement will allow us to be one of the most highly cost effective players in the RF component marketplace."

Researchers choose MBE System

Dr Christian Heyn and Prof Dr Wolfgang Hansen, senior researcher and head of the Semiconductor Epitaxy Group at the Nanostructure Physics Center, University of Hamburg, are to purchase a Riber Compact 21 HeM MBE system, for the fabrication of high mobility two-dimensional electronic devices, at the Institute of Applied Physics.

The focus of Prof Hansen's research group is materials science for micro and nanometer scale technology. The Compact 21 system will be dedicated to high mobility devices and related applications. Compact 21 is a flexible research and small-scale production MBE system, based on the MBE 49 platform. It can handle single 2" or 3" wafers.

Foundries merge

Taiwan based GaAs MMIC foundry Global Communication Technology Corporation (GCT) has merged with WIN Semiconductors Corp. Shareholders of both companies approved the merger and an equity swap at a 1:1.6 ratio (1.6 shares of WIN for every 1 share of GCT).

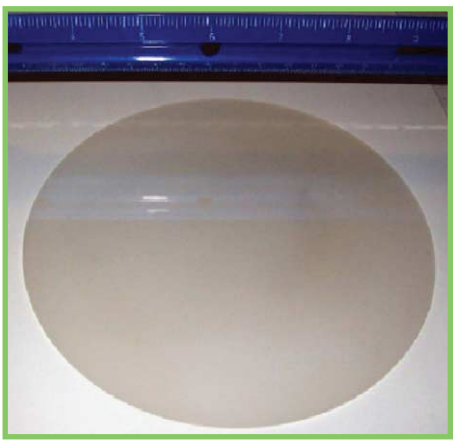
The merged company will maintain two 6" GaAs fabs: Fab 1 (WIN) and Fab 2 (GCT).

TDI's GaN breakthrough

Technologies and Devices International Inc (TDI) claim a technical breakthrough by fabricating the industry's first 6" diameter GaN epitaxial materials. The GaN-on-sapphire epitaxial wafers were fabricated at TDI using the company's patented hydride vapour phase epitaxial (HVPE) process and equipment.

GaN is a high performance compound semiconductor material used for the fabrication of blue spectrum (blue, green, ultra violet and white) LEDs, LDs, and high power/high frequency transistors for radar, wireless communication, and space electronics. White LEDs in particular are the focus of development, with the aim of replacing traditional forms of illumination. Blue LDs are key elements for the upcoming generation of giant capacity DVD/CD and optical drives.

According to Strategies Unlimited, the GaN device market is projected to exceed $4bn in 2007. Key to achieving this growth is the transition to larger wafer sizes. Currently the industry standard is 2" diameter epitaxial wafers, with R&D effort producing 3" and 4" sizes. Transitioning to larger substrates will tremendously benefit GaN device performance and economics. The most common substrate material for GaN epitaxy is sapphire.



Vladimir Dmitriev, president and CEO of TDI, said: "This result became possible due to our collaboration with Rubicon Technology Inc, a U.S. based company, which supplied the 6-inch polished sapphire substrates, and with U.S. Departments of Commerce, Energy, and Defense, who provided the financial support through several R&D programs directed to developing a new generation of GaN epitaxial technology. This demonstration of 6-inch GaN epitaxy is a specific result of the Phase I SBIR program recently awarded to TDI by the Missile Defense Agency."

Epichem and Power+Energy form sales alliance

Epichem Group, a UK-based supplier of specialty chemicals and the metalorganic materials used to produce compound semiconductors, and Power+Energy Inc (P+E) of the USA have established a global sales alliance. This alliance (which excludes Japan) provides sales representation for P+E's palladium alloy hydrogen purifier product lines through Epichem's sales force and global distributor network. P+E's purifiers are principally used in the fabrication of compound semiconductors, including LEDs, laser diodes and other high performance semiconductors, such as silicon carbide devices.

P+E supplies equipment that converts commercially available hydrogen to ultra-high purity (UHP) hydrogen containing less than one part per billion total impurities.